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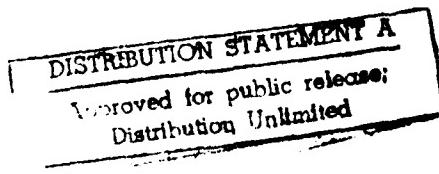
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SUMMARY

This paper reviews recent efforts on the part of several federal agencies to apply demographic forecasting to federal assistance. These efforts reflect a growing concern at all levels of government for the equitable and efficient funding of capital projects, whose benefits and costs are spread out over many years and for which funding commitments must normally be made well in advance.

The proposal to create a standard set of population projections for subnational areas originated in a request from the Director of the Office of Management and Budget to examine the technical and policy implications of the requirement to use population projections for allocating federal funds (an issue that first arose when Congress passed the Clean Water Amendments Act, a section of which contains such a requirement). The proposal's subsequent evolution raises a number of potentially troublesome issues in federal-state-local relations.

If projected population is to become a factor for the allocation of public funds, then certain questions should be answered before putting the allocation mechanism in place: (1) Who decides what assumptions will be used to prepare the baseline projection series? (2) How often should any of the projection series prepared under the federal mandate be updated? (3) What effect (if any) will updating have on funding commitments made under previous projection series? (4) Will the requirement to use a single projection series for all federal funding purposes lead to an inflexible planning environment? (5) Will the existence of a baseline projection series for states (one that inevitably will carry the label "official" in the minds of most users) obviate the need to produce other federal projection series, such as the Census Bureau's illustrative

series? (6) Who will ultimately resolve disputes arising under the federal projections mandate? (7) To what extent does the use of population projections to allocate public funds constitute an ad hoc growth policy?

THE USE OF POPULATION PROJECTIONS TO ALLOCATE PUBLIC FUNDS

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Census counts and current population estimates are used to allocate public funds under a wide array of federal assistance programs. Among those programs, general revenue sharing is probably the best known because it annually dispenses billions of dollars to state and local governments. Population projections, however, unlike census figures and current estimates, have never been used formally to allocate federal assistance funds. Indeed, considering the generally dismal record of demographic forecasting, one might wonder why anyone would even seriously consider using projections for this purpose. Critics of the art of projection, who are too numerous to count, are given to such acid comments as, "Demographic forecasts are seldom right, and when they are, no one seems to know why." With all the bad publicity, you would think that population projections would be banished forever from the land of federal funding. Right? Wrong!

For almost three years now, a few high-level federal committees, several federal agencies, and an entourage of local governments,

[1]The author, a Rand consultant, prepared this paper for the Rand Population Research Center. It was presented at a Center Seminar in Fall, 1979, and is scheduled to appear in American Demographics in slightly modified form in 1981. The author thanks Jeanne Griffith, Office of Federal Statistical Policy and Standards, Department of Commerce, and Peter A. Morrison, Director of The Rand Corporation's Population Research Center, for their assistance and advice.

regional councils, professional associations, special-interest groups, and concerned citizens have been involved in developing guidelines and procedures for using population projections to distribute federal money. The effort to apply demographic forecasting to federal assistance reflects a growing concern at all levels of government for the equitable and efficient funding of what are popularly called capital projects--projects whose benefits and costs are spread out over a number of years and for which funding commitments must normally be made well in advance. Allocating both short-term and long-term capital funds on the basis of projected population, rather than census counts or current estimates, would seem to address the question of equity, while, at the same time, allowing federal program managers to use an easily defined variable in a rather simple distribution mechanism: Put together a set of baseline projections for states, give these figures to the states and have them allocate the projected growth to substate areas, and then use both the state and substate numbers to distribute money. As parties to the effort have discovered, however, what seems simple does not always turn out that way. Among other things, the proposal to create a standard set of population projections for subnational areas has raised a number of potentially troublesome issues in federal-state-local relations.

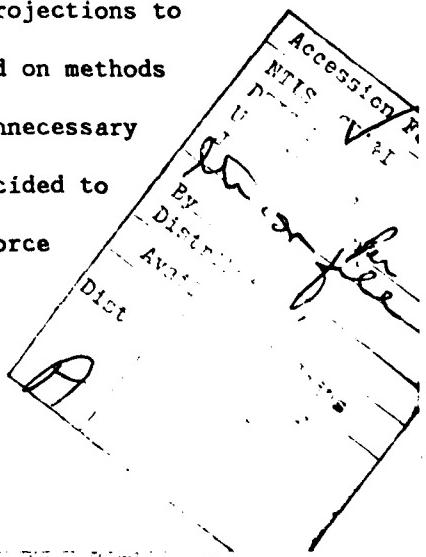
To understand what has happened, where things stand, and what questions remain unanswered, we must start at the beginning. The following factual account derives from the proceedings of an April 1979 meeting of a Census Bureau task force on population projections, held in Philadelphia just before the annual meeting of the Population Association of America.

BACKGROUND INFORMATION

In 1977, the Office of Federal Statistical Policy and Standards (formerly the Statistical Policy Division of the OMB) was established within the Department of Commerce. At the same time, and by the same Executive Order, a Cabinet-level committee, the Statistical Policy Coordination Committee (SPCC), also was created. This committee, charged with providing statistical advice to the President, is composed of all of the Cabinet offices, as well as the OMB Director, the Chair of the Council of Economic Advisors, the Chair of the Federal Reserve Board, and the Administrator of the Environmental Protection Agency (EPA).

About three years ago, the Director of the OMB requested the SPCC to examine the technical and policy implications of the requirement to use population projections for allocating federal funds. (This issue first arose when Congress passed the Clean Water Amendments Act, a section of which contains such a requirement.) The SPCC accepted the assignment and created a Task Force to study the matter.

At almost the same time, another interagency Cabinet-level committee was created to coordinate the activities of Departments that have significant dealings with state and local governments. This committee, designated the Interagency Coordinating Committee (IACC), independently recognized the problem of using population projections to distribute federal funds. The concerns of the IACC focused on methods and procedures used in funding allocations. To avoid an unnecessary duplication of effort, members of the IACC and the SPCC decided to collaborate on the projections issue, with the SPCC Task Force performing the staff function for both groups.



After several months of investigation, everyone involved saw that a nontechnical task force simply could not handle the problem areas that had been identified to that point. Consequently, with the approval of the two parent committees, the SPCC Task Force appointed members to a special technical assistance committee. These members were drawn from the federal government, state governments, and the academic community. The special committee met for two days in December 1978. It recommended that the Department of Commerce prepare a single set of population projections for funding applications that would incorporate both economic and demographic variables.

In making this recommendation, committee members were revealing two major findings. First, to the extent that population is an appropriate variable for funding purposes, the committee had been persuaded that projections offer a more equitable basis for distributing long-term capital funds than do either census counts or current population estimates. Second, recognizing the role of migration in subnational population change and the role of economic factors in migration, especially interstate migration, committee members decided to encourage the use of a projection method that would have an explicit economic dimension. To avoid giving the impression that the single set of federal projections would supersede all other projection series, including those produced at state and local levels for a wide range of planning and policy purposes, the committee strongly recommended that the special federal numbers be restricted to states. According to the committee, state governments should develop methods and procedures for allocating these numbers to smaller geographical units. Furthermore,

state and local governments, as well as federal agencies, should be able to develop alternative projection series for applications not related to federal funding.

The recommendations of the technical committee were generally accepted by the SPCC Task Force and provided a technical foundation for the final recommendations of the full SPCC. The following observations summarize the SPCC position:

1. Although the use of population projections in formula allocations should be discouraged, they are not an inappropriate planning element for federal funding decisions.
2. The state projection model should incorporate both demographic and economic variables. The completed model will be published by the Commerce Department for review and comment by all interested parties, including state, regional, and local agencies.
3. Each state should develop methods and procedures for disaggregating the federally produced state projection and must circulate them for review and comment by all substate areas.
4. States that have adopted a population distribution policy, either explicitly or implicitly, may elect to use this policy as a basis for substate allocations.
5. The federal government must approve all allocation schemes, including those prepared for substate areas.
6. All federal agencies must use the Commerce Department baseline projection series for funding purposes. When funding is not an issue, however, federal agencies may turn to other projection

series.

7. The federal government shall assume responsibility for updating the projections prepared for funding allocations.

The task of developing the projection methodology for the Commerce baseline series fell jointly to the Census Bureau and the Bureau of Economic Analysis (BEA). Both agencies publish population projections for states. The Census Bureau uses a modified cohort-component procedure to produce projections that are essentially demographic. The BEA uses a modified employment-participation method to produce projections that are essentially economic. Conceptual and methodological differences between the two projection systems are so substantial that it will take a great deal of time, money, and other resources to develop an integrated economic-demographic framework--one that is technically credible and can be sold to the many interested parties who would be affected by a federal projections mandate. It is not, as many believe, simply a matter of "plugging" one system into the other.

The task of drafting procedures to govern the use of projections in substate allocations fell to the Office of Intergovernmental Relations in the OMB. Once such procedures have been adopted, the OMB will issue circulars requiring various federal agencies to incorporate them in their regulations. The first set of procedures was distributed for comment during May 1979. The set covers the following points:

1. Each state must identify procedures for the coordination and participation of substate units of government. This provision

extends to state and local agencies responsible for, or having a major interest in, programs affected by the use of standardized population projections.

2. Each state must identify procedures for the coordination and participation of public interest groups in substate distribution.
3. Each state must provide for the direct involvement of elected officials in the substate distribution process.
4. Each state must establish an appeals procedure to cover disputes between interested parties.
5. Each state must submit all procedures to the federal government for review and comment, and possible approval. This provision includes projection methods used to disaggregate state control totals.
6. Each state must designate a state agency to assume responsibility for all matters relating to the substate distribution process.

Two difficult procedural issues are the federal approval of state proposals and the state review of substate distribution schemes. These issues must be completely resolved before the OMB can issue final policy statements. Both issues involve major questions of intergovernmental relations.

CURRENT ACTIVITIES

The findings of the various federal committees and task forces that had been a party to the baseline-projections debate were fashioned into

a series of recommendations on the use of projections to distribute federal funds. To provide for the usual review and comment by concerned persons and groups, the recommendations were published in the Federal Register on December 5, 1979. The Office of Federal Statistical Policy and Standards (OFSPS) in the Department of Commerce, and the Office of Intergovernmental Relations in the OMB, were designated to receive comments.

Reactions were predictably swift. They came from all corners of both the public and private sectors. The comments generally endorsed the concept of a baseline projection series but offered only scattered support for the set of guidelines and procedures announced in the Federal Register. Their common theme, then, is that although the principle has merit, the game plan apparently does not.

The comments received covered numerous issues--most of them variations on a few central themes, according to a typology of responses assembled by OFSPS personnel. The following central themes are apparent:

1. The projection model proposed by the Census Bureau and the BEA for use in preparing the baseline series is seen as inadequate. Respondents claim it does not permit the true interaction of demographic and economic variables, as the SPCC Task Force Technical Committee had recommended. Furthermore, it is untested and experimental.
2. States should be permitted to prepare their own population projections, respondents claim, instead of having these numbers prepared for them at the federal level. State-produced

projections can be compared with federally produced projections for states, using some range of difference to determine when the state-produced figures satisfy federal requirements.

3. The methods and procedures used by states to allocate projected growth to substate areas should not be subject to federal approval, according to respondents. Different states should be allowed to use different allocation schemes.

The message of the comments received by the two federal agencies is unmistakably clear: The states are willing to play the baseline projections game, though more on their own terms, and they want federal endorsement of the terms they set. Under the proposed guidelines, state involvement is seen as both limited and inflexible. Clearly, the states want fewer restrictions on their roles. A number of respondents representing substate interests took a similar attitude toward state-local relations under the proposed guidelines.

Where do things now stand? Because of the apparent support for using population projections to distribute federal money, but not according to the scheme that has been proposed, an obvious course of action is to try again. And that appears to be the direction things are going. At this writing, federal agencies are sifting through the comments on the proposed scheme to determine what modifications might win greater support. Among other things, major surgery appears likely for the projection model developed jointly by the Census Bureau and the BEA. No one can say as yet whether a more generally acceptable model can be constructed from pieces of the existing framework, or whether the two agencies will have to scrap this framework and look for another.

The task of model-building that confronts these two agencies is made more difficult by the requirement that the finished product incorporate both demographic and economic variables. Nearly everyone would applaud such an achievement, of course: The interaction of demographic and economic factors is important to the projection of state and local population. But it is quite another matter to find empirical specifications that reflect this interaction. To the surprise of no one familiar with the state of the art, the technology of economic-demographic modeling is not at all highly developed. It may be that those who champion the proposed scheme are pressing beyond what can be done with what is known. In any case, it is interesting that the proposed economic-demographic model constructed from the Census Bureau and the BEA projection systems should be subjected to such intensive criticism, when each of the two parent models has the support of large numbers of people who found the hybrid model inadequate.

IMPORTANT QUESTIONS

During the next year, as we move toward the release of 1980 Census figures for states and local areas, we should not be surprised to find the Department of Commerce (or some other federal agency) making arrangements for the preparation of a baseline projection series. Such arrangements seem inevitable at this point; the precise timing hinges on how many iterations of the guidelines-approval process will be necessary to gain closure. If projected population is to become a factor for the allocation of public funds, then certain questions should be answered before putting the allocation mechanism in place. Some of the questions

that have occurred to me over the past several years, as I have been watching this debate unfold, have already been answered. But other questions remain. And some may never be answered. Among those questions that the use of population projections to distribute federal money would naturally raise, the following are particularly important:

1. Who decides what assumptions will be used to prepare the Commerce Department baseline projection series?
2. How often should any of the projection series prepared under the federal mandate be updated?
3. What effect (if any) will updating have on funding commitments made under previous projection series?
4. Will the requirement to use a single projection series for all federal funding purposes lead to an inflexible planning environment? Will planners be worse off, or better off, if they are locked into a particular set of numbers? Will the mandated use of a single projection series actually improve the quality of the planning effort at any level of government?
5. Will the existence of a baseline projection series for states, a series that is very likely to carry the label "official" in the minds of most users, obviate the need to produce other federal projection series, such as the illustrative series now prepared by the Census Bureau? Will the simple availability of a projection series for federal funding lead to its expanded use in federal assistance legislation? What risks are associated with such supply-induced demands?

6. Who will ultimately resolve disputes arising under the federal projections mandate? If an administrative appeals process does not satisfy the interested parties, can the matter then be taken to court? What does the judicial system know about population projections?
7. To what extent does the use of population projections to allocate public funds constitute an ad hoc growth policy? Is an ad hoc policy better than a formal one? In states and local areas that may not have adopted formal growth policies, will the mandated substate disaggregation of the federal control total for states encourage communities to develop rather simplistic growth policies defined solely in terms of population?

The production of a baseline projection series for population is either a good idea or a bad one, depending on one's perspective. Judging from the general reaction to the proposed guidelines, one can conclude that there is widespread support for the greater standardization of projection series. But what will happen to the role of judgment in demographic forecasting once standardized projections for states and local areas are routinely available? Will planners continue to give the same thoughtful attention to each planning problem by tailoring projections specifically to the needs of that problem, or will they find in the baseline series a convenient, if possibly less effective, "projection for all seasons"?

The baseline series is being developed for federal funding allocations. However, the mere existence of numbers that carry the

label "official" in the minds of many will lead to their unquestioned use for purposes to which they may not be very well suited. After all, as Morrison (1975)[2] has noted, demographic forecasting is least effective when it is conducted as a purely mechanical process. There is always the temptation to pick a method that somebody else has approved, plug in some numbers, and crank out some more numbers that tell people what to do. Such exercises can be comforting to the decisionmaker, because they produce columns of numbers that look convincing; and wrong decisions can always be blamed on the model.

It should be possible, however, to improve the odds on making right decisions, not only by working to improve the models we use, but also by sharpening our ability to evaluate their products, especially when the products disagree. Those who use demographic forecasts must exercise at least as much judgment as those who make them. Users may stand to lose if the proposed guidelines achieve standardization at the expense of judgment. They might discover one day, to their surprise, that the whole thing was not such a good idea after all.

[2]Morrison, Peter A., 1975. "Overview of Population Forecasting for Small Areas." Paper P-5447, The Rand Corporation, Santa Monica, California 90406.

